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**DEPARTMENT OF DEFENSE** 

Office of the Secretary

Global Positioning System Pre-Operational Civil Navigation Message

**AGENCY:** Office of the Secretary of Defense, Office of Public Affairs, DoD.

**ACTION:** GPS notice.

**SUMMARY:** The purpose of this notification is to inform users of an upcoming event related to

the Global Positioning System (GPS) satellite constellation. U.S. Air Force Space Command

will begin providing pre-operational, Civil Navigation Message (CNAV) populated L2C and L5

signals beginning April 28, 2014 in a 2-phase plan, as previously highlighted in a Department of

Transportation notice that published in the Federal Register on March 5, 2014 (79 FR 12563-

12564). Based on the response to the March 5, 2014 notice, and extensive discussion and

cooperation between the Office of the Secretary of Defense (OSD) and the Department of

Transportation, OSD has approved a modification to U.S. Air Force Space Command's planned

implementation of CNAV. The public should consider these broadcasts to be "use at one's own

risk," since a fully operational command and control and signal monitoring infrastructure is not

yet in place.

FOR FURTHER INFORMATION CONTACT: Brigadier General David J. Buck, USAF,

Director of Air, Space and Cyberspace Operations, Department of the Air Force, Headquarters

Air Force Space Command, 150 Vandenberg Street, Suite 1105, Peterson AFB, CO 80914-4170.

**SUPPLEMENTARY INFORMATION:** 

The CNAV message broadcasts planned to begin in April 2014 will be implemented on all

operational GPS satellites capable of transmitting the L2C and L5 signals. Currently, seven GPS

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IIR-M satellites broadcast L2C and four GPS IIF satellites broadcast L2C and L5. On average, users may expect at least one L2C-broadcasting satellite to be in view at all times. The CNAV message content will initially include Broadcast Message Types (MT) 10, 11, 30, and 33 (as defined in Interface Specification (IS)-GPS-200G IS-GPS-705C, and http://www.gps.gov/technical/icwg/) in lieu of the currently transmitted MT-0. The Air Force intends to broadcast L2C messages with the health bit set "healthy," as was the case during a June 2013 test. L5 messages will be set "unhealthy," but as greater experience with the L5 broadcast and implementation of signal monitoring is achieved, this status will be reviewed and revisited. Should it be determined to set the L5 health bit to "healthy," advance notification will be made to the public. The CNAV data uploads will be integrated into current operations, but initially uploads to each appropriate satellite will occur only twice per week. In December 2014, CNAV uploads are planned to be at the normal rate of once per day for each appropriate satellite. Consequently, users should expect L2C and L5 signals with CNAV messages to provide increased user range error compared to legacy civil signals between April and December 2014. After December 2014, the user range error of the L2C and L5 signals with CNAV messages is expected to meet or exceed that of legacy signals. However, availability will remain low and CNAV-derived user position accuracy may be poor until more L2C and L5 capable satellites are operational. Future tests and implementation of the remaining CNAV message types will be announced under separate Federal Register notices.

The pre-operational CNAV messages are being made available for user familiarization and for equipment development. The messages will be formatted in accordance with IS-GPS-200G and IS-GPS-705C; however, a pre-operational signal means the availability and other characteristics of the broadcast signal may not comply with all requirements of the relevant Interface

Specifications. The signals should be employed at the users' own risk and should not be used for safety-of-life or other critical purposes.

Dated: May 8, 2014.

Aaron Siegel,

Alternate OSD Federal Register Liaison Officer, Department of Defense.

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